Mosquito Control Q's & A's

These questions were gathered at a Churchland Civic League meeting held on Oct. 13, 2004.

Why do the aerial sprayings start so late in the year? Mosquito season starts in April or May, yet the sprayings didn't begin until August.

There are over 15 mosquito species active in Portsmouth. Only two species make up the majority of mosquitoes inside the large diked containment areas of Craney Island; a third species can be found breeding in fringe areas. Other species have not been found to breed on Craney Island. Different species are typically active at different times of the year. At Craney Island, we rarely see much mosquito activity before July. We would expect to begin aerial spraying somewhat earlier than we did in 2004, but probably not in April or May.

A more proactive initiative to kill mosquitoes before they hatch through source reduction, biological control (mosquito fish), and larvicides has been implemented and will be fully operational before next mosquito season. Based on surveillance efforts, activity of the dredged material containment cells, and environmental conditions, aerial sprayings may not be needed until later in the year. When cells are active (when dredged material is being pumped into a cell), large-scale application of pesticides is unnecessary. Intensified monitoring will help detect breeding areas and target more effective and timely treatment. Habitat and larvae control measures will be implemented early in the year to help prevent the emergence of adults in large numbers. Monitoring mosquito larvae and adult traps will result in effective and timely aerial spraying efforts.

How often does the Corps conduct larval monitoring?

The Norfolk District conducts larval monitoring each week. Currently, known and potential breeding sites are being recorded in a mapping database. A sample number of these breeding sites will be monitored during each event. Additional areas will be sampled and included in the monitoring scheme as they are discovered. Heavy rainfall events will require extra monitoring events.

The City of Portsmouth has a number we can call to have their neighborhoods sprayed. Who is the contact for the Corps and the Navy?

Keith Lockwood, Environmental Scientist, is the POC for the Corps. His number is 441-7127. The POC for the Navy is LCDR Brian Prendergast, Medical Entomologist. His number is 444-7671 ext 3048.

You mentioned that what has been reported in the newspaper, that 80 percent of mosquitoes in Portsmouth are found near Craney Island, but said it's a myth. Are you saying that they're all coming from the landfill?

No, we don't have the data to make that assumption. But we'll tell you what we do know. The City of Portsmouth has mosquito traps throughout the city, which allow them to gather accurate data on mosquito populations. It is true that 60% of mosquitoes (or 24,000) trapped through the end of September were in a trap on the City landfill adjacent to Craney Island, so those mosquitoes are a result of conditions on Federal and City of Portsmouth properties. This trap location is surrounded by large stands of the invasive plant *Phragmites australis*, which captures water in the low-lying areas, and clogs ditches on Federal and City of Portsmouth properties and serves as prime breeding grounds for mosquitoes. The Corps is going to clear *Phragmites* and other vegetation on the southern border of Craney Island this winter in an effort to drastically reduce the amount of mosquitoes potentially breeding on Corps' property. Perhaps a better question is "What's going on in the neighborhoods?" At the Churchland HS trap, one mile south of Craney Island, only 3,000 mosquitoes have been trapped during the same time frame. In fact, mosquito counts here are 30 percent below the past 4-year average, even though this was one of the wettest summers on record.

What's the status of the budget for mosquito control in 2005?

The mosquito control budget for 2005 was originally set at $38,000; however, based on information obtained from recent studies and our commitment to enhanced mosquito control initiative, we now expect to allocated approximately $145,000 from our maintenance budget for mosquito surveillance and control in 2005.

Are there any other chemicals you could use than Dibrom?

Dibrom (Naled is the active ingredient) is used because it has low environmental persistence, which minimizes prolonged exposure to wildlife. There are other adulticides available, but they are more toxic to the environment than Naled, which the Environmental Protection Agency (EPA) has accepted has an environmentally acceptable method to control mosquitoes. We will include other pesticides in the Supplemental Environmental Assessment that are EPA registered and will not cause adverse impacts to wildlife at Craney Island.

When will the Corps begin capturing data? When will the website be up and running?

The Corps is currently capturing data of known and potential mosquito breeding locations. The website has been created and new information will be posted as it is collected.

What are the affects of Dibrom on the human respiratory system?

The following information was taken directly from the EPA website (www.epa.gov). Naled is the active ingredient in Dibrom.

"Does Naled Pose Risks to Human Health?

Naled can be used for public health mosquito control programs without posing unreasonable risks to the general population when applied according to the label. EPA has estimated the exposure and risks to both adults and children posed by ULV aerial and ground applications of naled. Because of the very small amount of active ingredient released per acre of ground, the estimates found that for all scenarios considered, exposures were hundreds or even thousands of times below an amount that might pose a health concern. These estimates assumed several spraying events over a period of weeks, and also assumed that a toddler would ingest some soil and grass in addition to skin and inhalation exposure."

What is the process for notifying the residents of the aerial sprayings?

Every time an aerial flight is scheduled, the Corps puts out a press release that is generally picked up by local media. However, often the best we can do is give a time frame of several days when the spraying will occur, due to weather conditions and wind patterns. If a citizen has a question about the spraying, they may call the Corps at 757-441-7127. We are also working on additional notification methods for next mosquito season, including the website and a hotline with up-to-the-minute information on a planned spraying.

Have you looked into different larvicides and herbicides than the ones you are currently using?

Yes, we are currently revising the original Environmental Assessment to include additional larvicides and herbicides for mosquito control.

Why has the mosquito problem gotten worse over the years?

One reason conditions have gotten worse is there have been non-native mosquito species accidentally imported into the United States. One of the most persistent and irritating is the Asian tiger mosquito (*Aedes albopictus*). It is believed to have entered the United States in the mid 1980's in tires sent to this country for recycling. The conservation union dubbed it one of the top 100 invasive species in the world. Its larvae are able to survive in almost any standing water, from backyard dog dishes to cemetery flowerpots. That makes it especially prevalent in neighborhoods, because anything that collects a little rainfall makes a perfect habitat for millions of mosquito eggs. Unlike most mosquitoes, this one feeds both day and night, making it more likely than other mosquitoes to bite people. While it only makes up about 10% of the mosquitoes trapped in Portsmouth, it is an aggressive and irritating pest, and the low trap numbers contradict its real impact. This particular species has not been found breeding at Craney Island.

Mosquito population trends are dependent upon the environmental conditions. Wet or rainy years can provide more habitat for mosquitoes to breed. Some areas have seen increases in mosquitoes this year due to the present environmental conditions. However, many areas saw a decrease in the mosquito population this season. Since there are many species of mosquitoes, a control measure causes a decrease in the number of one species of mosquito, but can give another species an opportunity to fill the niche. This is the reason why multiple types and methods of mosquito control are essential for effective mosquito control. Regarding mosquito control at Craney Island, we are implementing

better surveillance methods to include adult traps. The adult traps will allow us to collect data to determine the numbers and types of mosquitoes found at Craney Island. We will use this information to monitor the effectiveness of our control strategies and this information will be posted on our web site. The information we collect can be added to the information collected by others to provide a more holistic look at the probable sources of the mosquito production both on and off federal property.

Of the four strategies (surveillance, habitat control, larvae control, adult control) which is the most expensive?

In previous years, adult control has been the most expensive strategy because it has been the most relied-upon approach. However, we expect to provide a more balanced and integrated program next mosquito season. Surveillance, source reduction activities, and application of larvicides will be implemented early in the mosquito season and throughout the year to help prevent a large emergence of adults. The enhanced surveillance/monitoring program, in conjunction with source reduction measures, will likely constitute the greatest expense next year.

Do the mosquito eating fish survive winter?

Yes. Mosquito fish have successfully over wintered in temperatures reaching negative thirty degrees Fahrenheit, and will withstand summer air temperatures reaching one hundred degrees Fahrenheit. The fish will continue to feed on mosquito larvae even in cold weather.

What control methods do they use on Wallop's Island?

There are currently no mosquito control methods employed on Wallop's Island. Offices contacted include the NASA Wallops Flight Facility and the US Fish & Wildlife Service's office in charge of the Wallops Island National Wildlife Refuge.

Will the website allow for 2-way flow of information?

Yes, there will be an email link for comments/questions.